

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
29 September 2005 (29.09.2005)

PCT

(10) International Publication Number
WO 2005/089827 A1

(51) International Patent Classification⁷: **A61L 27/44**,
27/58

(21) International Application Number:
PCT/SG2005/000087

(22) International Filing Date: 18 March 2005 (18.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
200401544-2 22 March 2004 (22.03.2004) SG

(71) Applicants (*for all designated States except US*):
**AGENCY FOR SCIENCE, TECHNOLOGY AND
RESEARCH?** [SG/SG]; 20 Biopolis Way, #07-01 Cen-
tros, Singapore 138668 (SG). **RAPID-TECH PTE LTD**
[SG/SG]; 78 Shenton Way, #01-04 Malayan Credit Build-
ing, Singapore 079120 (SG).

(72) Inventors; and

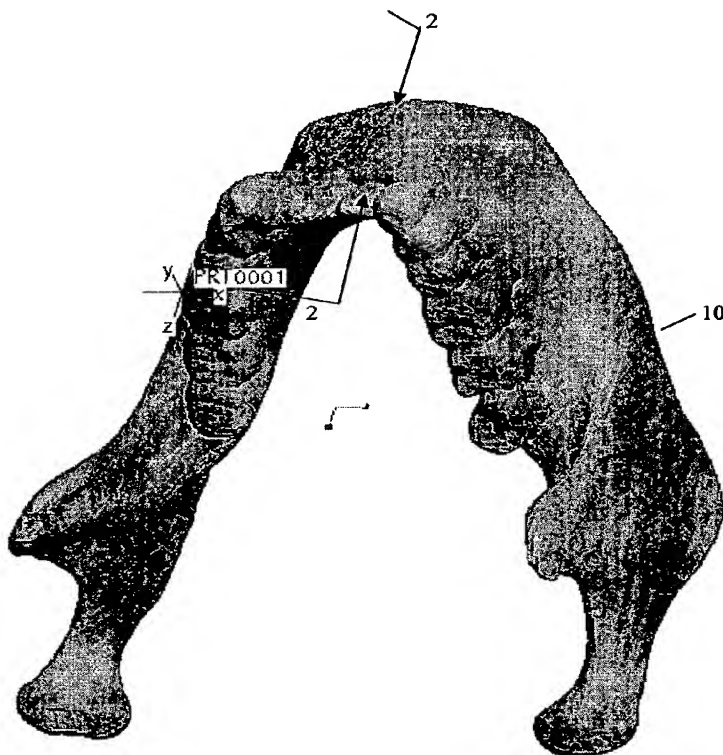
(75) Inventors/Applicants (*for US only*): **MARGAM, Chan-
drasekaran** [IN/SG]; Block 103, Bukit Batok Central,
#02-235, Singapore 650103 (SG). **ZHANG, Su, Xia**
[SG/SG]; Block 220, #11-05, Westwood Avenue, Singa-
pore 648352 (SG). **TAY, Bee, Yen** [SG/SG]; No. 11 Jalan
Angklong, Singapore 578713 (SG).

(74) Agent: **ALBAN TAY MAHTANI & DE SILVA?**; 39
Robinson Road, #07-01 Robinson Point, 068911 Singapore
(SG).

(81) Designated States (*unless otherwise indicated, for every
kind of national protection available*): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ,

[Continued on next page]

(54) Title: METHOD FOR OBTAINING GRADED PORE STRUCTURE IN SCAFFOLDS FOR TISSUES AND BONE, AND SCAFFOLDS WITH GRADED PORE STRUCTURE FOR TISSUE AND BONE



(57) Abstract: A scaffold for at least one of: tissue regeneration and bone growth, the scaffold being fabricated from at least two polymers, the polymers being of differing rates of bio degradability. A first of the at least two polymers is able to be leached by a solvent, and all other polymers of the at least two polymers being either inert to the solvent or having a lower dissolution rate in the solvent. The scaffold has a graded porosity with high porosity at a surface of the scaffold, and low porosity at a core of the scaffold.



TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— *of inventorship (Rule 4.17(iv)) for US only*

Published:

— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.